



Variations of the Magnetic Pile-up Boundary Location in the Martian Magnetosphere

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The location of the magnetic pile-up boundary (MPB) determines the size of the region where planetary ions can be accelerated and where energetic neutral atoms can be produced. We use data of the Mars Express Aspera instrument to determine the stand-off distance of the MPB dependent on the Mars crustal magnetic fields and solar zenith angle. We discuss the importance of these observations for the escape of planetary ions and neutral atoms.